

# PATENT ABSTRACTS OF JAPAN

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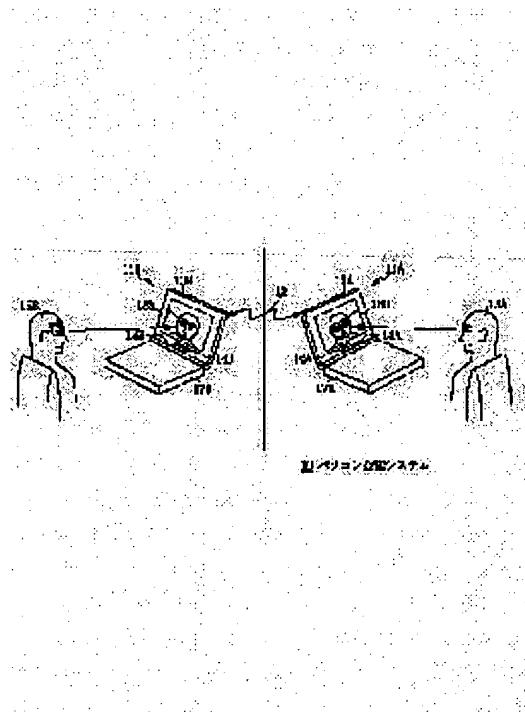
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## (54) REMOTE CONFERENCE SYSTEM AND TERMINAL FOR REMOTE CONFERENCE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To obtain a naturalistic video image without a sense of incongruity by providing an image pickup means that photographs an image of the user using a remote conference terminal and an image pickup direction variable means that varies an image pickup direction of the remote conference terminal.

**SOLUTION:** A user 15A opens a liquid crystal display panel section 13A, turns a camera head section 14A, raises it from a container section 16A to photograph the user itself. After the end of photographing, the user turns the camera head section 14A and puts it in the container section 16A and closes the liquid crystal display panel section 13A. A microphone picking up a voice signal and a speaker outputting a voice of an opposite party are placed respectively at a prescribed position of a PC 11A. When an instruction is received from the user 15A by various operation keys, a photographed image 18A of the user 15A and the picked-up voice signal are sent to a PC 11B used by the user of the opposite party via a communication line 12 and then the image is displayed on a screen and the voice is outputted.



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CLAIMS

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## [Claim(s)]

[Claim 1] Have two or more terminal units for teleconferencing, and, therefore, the image of each user who uses two or more above-mentioned terminal units for teleconferencing is picturized to the above-mentioned terminal unit for teleconferencing corresponding to each user concerned. In the teleconferencing equipment which transmits to the above-mentioned terminal unit for teleconferencing with which a dialogue partner uses the image of each above-mentioned user concerned who picturized, and is displayed on the display means of the terminal unit for teleconferencing concerned The above-mentioned terminal unit for teleconferencing is teleconferencing equipment characterized by having an image pick-up means to picturize the image of the above-mentioned user who is prepared in some above-mentioned terminal units for teleconferencing, and uses the above-mentioned terminal unit for teleconferencing, and the image pick-up direction adjustable means which makes adjustable the image pick-up direction of the above-mentioned image pick-up means.

[Claim 2] The above-mentioned image pick-up direction adjustable means is teleconferencing equipment according to claim 1 characterized by supporting the above-mentioned image pick-up means to the above-mentioned terminal unit for teleconferencing.

[Claim 3] The above-mentioned image pick-up means and the above-mentioned image pick-up direction adjustable means are teleconferencing equipment according to claim 2 characterized by being prepared in a part of above-mentioned display means.

[Claim 4] The above-mentioned terminal unit for teleconferencing is teleconferencing equipment according to claim 2 characterized by having an input means for the above-mentioned user inputting various kinds of directions information, and forming the above-mentioned image pick-up means and the above-mentioned image pick-up direction adjustable means in a part of input means concerned.

[Claim 5] Therefore, the image of each user who uses two or more terminal units for teleconferencing is picturized to the above-mentioned terminal unit for teleconferencing corresponding to each user concerned. In the above-mentioned terminal unit for teleconferencing of the teleconferencing equipment which transmits to the above-mentioned terminal unit for teleconferencing with which a dialogue partner's user uses the image of each above-mentioned user concerned who picturized, and is displayed on the display means of the terminal unit for teleconferencing concerned The terminal unit for teleconferencing characterized by having an image pick-up means to picturize the image of the above-mentioned user who is prepared in some above-mentioned terminal units for teleconferencing, and uses the above-mentioned terminal unit for teleconferencing, and the image pick-up direction adjustable means which makes adjustable the image pick-up direction of the above-mentioned image pick-up means.

[Claim 6] The above-mentioned image pick-up direction adjustable means is a terminal unit for teleconferencing according to claim 5 characterized by supporting the above-mentioned image pick-up means to the above-mentioned terminal unit for teleconferencing.

[Claim 7] The above-mentioned image pick-up means and the above-mentioned image pick-up direction adjustable means are a terminal unit for teleconferencing according to claim 6 characterized by being

prepared in a part of above-mentioned display means.

[Claim 8] The terminal unit for teleconferencing according to claim 6 characterized by having an input means for the above-mentioned user inputting various kinds of directions information, and forming the above-mentioned image pick-up means and the above-mentioned image pick-up direction adjustable means in a part of input means concerned.

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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

#### [0001]

[Table of Contents] This invention is explained in order of the following.

[0002] The technical field Prior art to which invention belongs ( drawing 7 )

The gestalt of implementation of technical-problem The means for solving a technical problem invention which invention tends to solve ( drawing 1 - drawing 6 )

Effect of the invention [0003]

[Field of the Invention] This invention relates to teleconferencing equipment and the terminal unit for teleconferencing, for example, is PC (PersonalComputer). It applies to the used desktop conferencing system, and is suitable.

#### [0004]

[Description of the Prior Art] Conventionally, this kind of desktop conferencing system is made as [ hold / a conference / between the conference rooms of these plurality ] by installing PC in two or more conference rooms of each in a remote place, and connecting by the communication line. When a conference is held between two conference rooms located in a remote place, for example as such a desktop conferencing system, A microphone and a loudspeaker are prepared in some PCs arranged in these two conference rooms, respectively at a television camera list. While displaying its own image on the display of PC of the other party, respectively by transmitting mutually the voice which collected the sound with image and microphone of the user who picturized with the television camera through a communication line, there are some which output voice from the loudspeaker of the other party, respectively. Therefore, the user is made as [ hold / a conference ] by viewing the image of the dialogue partner concerned displayed on the display, hearing a dialogue partner's voice outputted from a loudspeaker.

[0005] In such a desktop conferencing system, in order to hold a conference, viewing a dialogue partner's image displayed on the display, therefore, it picturizes to the television camera in which the user who is viewing this display was prepared by PC, and displays on the display prepared in the conference room of the other party by transmitting the image of the user concerned who picturized through a communication line. The television camera used with this desktop conferencing system was usually prepared in the upper part or a flank of a display etc. on the relation of magnitude.

[0006] The configuration of the conventional desktop conferencing system 1 is explained here using drawing 7 . This desktop conferencing system 1 consists of communication lines 3 which connect these two sets of two sets of desktop mold PC2A and 2Bs which were prepared in two conference rooms in a remote place, respectively, and PC2A and 2Bs. In this case, PC2A and 2B have the same configuration so that it may state below.

[0007] PC2A (2B) has display 4A (4B) as a display means to display an image, and television camera 5A (5B) is attached in the upper part of these displays 4A (4B), respectively. The microphone (not shown) which collects its voice to PC2A (2B), and the loudspeaker (not shown) which outputs a dialogue partner's voice are attached in the predetermined location with this, respectively. Moreover,

PC2A (2B) has keyboard 6A (6B) as an input means to input directions information etc., and user 7 of PC2A (2B) A (7B) is made as [ input / various kinds of directions information / from these keyboard 6A (6B) /, respectively ].

[0008] So, in a desktop conferencing system 1, if predetermined directions information is therefore inputted into user 7A (7B) from keyboard 6A (6B), respectively By transmitting mutually the voice therefore collected by image 8A (8B) and the microphone of user 7A (7B) therefore picturized by television camera 5A (5B) through a communication line 3 While carrying out a screen display of the image 8A to display 4B of PC2B and carrying out a screen display of the image 8B to display 4 of PC2A A, voice is outputted from the loudspeaker of the other party.

[0009] User 7A in this way, viewing image 8B which becomes by a dialogue partner's user 7B displayed on display 4 of PC2A A While talking therefore to the microphone and loudspeaker which were prepared in the PC2A concerned, user 7B Viewing image 8A which becomes by a partner's user 7A displayed on display 4B of PC2B, therefore, it can talk to the microphone and loudspeaker which were prepared in the PC2B concerned, and the users 7A and 7B located in a remote place by this can hold a conference.

[0010]

[Problem(s) to be Solved by the Invention] by the way -- in order that television camera 5A (5B) may picturize in the desktop conferencing system 1 of this configuration, respectively so that user 7A (7B) which is viewing display 4A (4B) may be looked down on from a top, or, as for picturized image 8A (8B), user 7A (7B) has turned to the bottom -- a thing [ like ] -- intermediary \*\*\*\*\*. In this desktop conferencing system 1, image 8A (8B) picturized in this way is transmitted, and image 8A (8B) user 7A (7B) has turned [ A ] to the bottom is displayed on display 4B (4A), respectively. For this reason, the problem which senses sense of incongruity and unnaturalness in case user 7A (7B) views image 8B (8A) currently displayed on display 4A (4B) in a desktop conferencing system 1, respectively since the look of user 7B and user 7A in image 8A does not agree while the look of user 7A and user 7B in image 8B does not agree is \*\*\*\*\*.

[0011] This invention tends to propose the teleconferencing equipment and the terminal unit for teleconferencing which can acquire the natural image which was made in consideration of the above point and does not have sense of incongruity.

[0012]

[Means for Solving the Problem] In order to solve this technical problem, it sets to this invention. Have two or more terminal units for teleconferencing, and, therefore, the image of each user who uses two or more terminal units for teleconferencing is picturized to the terminal unit for teleconferencing corresponding to each user concerned. In the teleconferencing equipment which transmits to the terminal unit for teleconferencing with which a dialogue partner uses the image of each user concerned who picturized, and is displayed on the display means of the terminal unit for teleconferencing concerned the terminal unit for teleconferencing It is prepared in some terminal units for teleconferencing, and an image pick-up means to picturize the image of the user who uses the terminal unit for teleconferencing, and the image pick-up direction adjustable means which makes adjustable the image pick-up direction of an image pick-up means were established.

[0013] Thus, the look of the user who views the image concerned for the look of the user in the image which the image pick-up direction of the image pick-up means concerned could be changed near a user's look, therefore was displayed on the display means can be made to agree mostly by having made adjustable the image pick-up direction of an image pick-up means.

[0014] Moreover, therefore in this invention, the image of each user who uses two or more terminal units for teleconferencing is picturized to the terminal unit for teleconferencing corresponding to each user concerned. In the terminal unit for teleconferencing of the teleconferencing equipment which transmits to the terminal unit for teleconferencing with which a dialogue partner's user uses the image of each user concerned who picturized, and is displayed on the display means of the terminal unit for teleconferencing concerned It is prepared in some terminal units for teleconferencing, and an image pick-up means to picturize the image of the user who uses the terminal unit for teleconferencing, and the image pick-up direction adjustable means which makes adjustable the image pick-up direction of an

image pick-up means were established.

[0015] Thus, the look of the user who views the image concerned for the look of the user in the image which the image pick-up direction of the image pick-up means concerned could be changed near a user's look, therefore was displayed on the display means can be made to agree mostly by having made adjustable the image pick-up direction of an image pick-up means.

[0016]

[Embodiment of the Invention] About a drawing, the gestalt of 1 operation of this invention is explained in full detail below.

[0017] In drawing 1, 10 shows the desktop conferencing system which applied this invention as a whole, and consists of communication lines 12 which connect these two sets of two sets of laptop type PCs 11A and 11B prepared in two conference rooms in a remote place, respectively, and PCs 11A and 11B. In this case, PCs 11A and 11B have the same configuration so that it may state below.

[0018] PC11A (11B) has liquid crystal panel section 13A (13B) as a display means to display an image, and camera head section 14A (14B) which is an image pick-up means is prepared in the lower part of these liquid crystal panel section 13A (13B) respectively free [ rotation ]. These camera head section 14A (14B) picturizes the image of user 15A (15B) which is the user who uses PC11A (11B). Moreover, stowage 16A (16B) is formed in the lower part of liquid crystal panel section 13A (13B), and it is made as [ contain / camera head section 14A (14B) ].

[0019] When holding a conference in this way, user 15A (15B) makes the condition that the user 15A (15B) itself can be picturized change by rotating camera head section 14A (14B), and making it rise from stowage 16A (16B), after opening liquid crystal panel section 13A (13B). On the other hand, when a meeting is finished, after user 15A's (15B's) rotating camera head section 14A (14B) and containing it to stowage 16A (16B), it closes liquid crystal panel section 13A (13B).

[0020] Moreover, the microphone (not shown) which collects its voice in PC11A (11B), and the loudspeaker (not shown) which outputs a dialogue partner's voice are attached in the predetermined location, respectively. Furthermore, PC11A (11B) has various actuation keys on body section 17A (17B) as an input means for inputting directions information etc., and user 15 of PC11A (11B) A (15B) is made as [ input / various kinds of directions information / from this actuation key /, respectively ].

[0021] So, in a desktop conferencing system 10, if predetermined directions information is therefore inputted into user 15A (15B), respectively from the various actuation keys on body section 17A (17B) By transmitting to PC11B (11A) for which a dialogue partner's user 15B (15A) uses the voice therefore collected by image 18A (18B) and the microphone of user 15A (15B) therefore picturized by camera head section 14A (14B) through a communication line 12 While carrying out a screen display of the image 18A to liquid crystal panel section 13 of PC11B B and carrying out a screen display of the image 18B to liquid crystal panel section 13 of PC11A A, voice is outputted from the loudspeaker of the other party.

[0022] User 15A in this way, viewing image 18B which becomes by a dialogue partner's user 15B displayed on liquid crystal panel section 13 of PC11A A While talking therefore to the microphone and loudspeaker which were prepared in the PC11A concerned, user 15B The users 15A and 15B located in a remote place can hold a conference by therefore talking to the microphone and loudspeaker which were prepared in the PC11B concerned, viewing image 18A which becomes by a dialogue partner's user 15A displayed on liquid crystal panel section 13 of PC11B B.

[0023] As shown in drawing 2 here, camera head section 14A (14B) is formed in the shape of a cylinder, and is attached in liquid crystal panel section 13A (13B) through supporter 19A (19B) which supports the camera head section 14A (14B) concerned. moreover, camera head section 14A (14B) is attached in the arrow head a or the direction of b free [ rotation ] to liquid crystal panel section 13A (13B), and there is not as [ change / by this / the image pick-up direction of the camera head section 14A (14B) concerned ] -- \*\*\*\*\*. In this way, user 15A (15B) can make camera head section 14A (14B) able to rise from liquid crystal panel section 13A (13B), or can contain it to stowage 16 of liquid crystal panel section 13A (13B) concerned A (16B).

[0024] As shown in drawing 3, by the way, this desktop conferencing system 10 Television camera 20A

(20B) is divided into camera head section 14A (14B) and camera signal-processing section 21A (21B). Among these, as camera head section 14A (14B) was mentioned above, while attaching in liquid crystal panel section 13A (13B) respectively free [ rotation ], it is made as [ contain / in body section 17A (17B) / camera signal-processing section 21A (21B) /, respectively ].

[0025] Camera head section 14A (14B) has lens 22A (22B) and solid state image sensor (CCD:Charge Coupled Device) 23A (23B), and carries out incidence of the image pick-up light L1A (L1B) obtained from user 15A (15B) which is a photographic subject to CCD23A (23B) through lens 22A (22B). By carrying out photo electric conversion of the image pick-up light L1A (L1B), CCD23A (23B) obtains image pick-up signal S1A (S1B), and outputs this to camera signal-processing section 21A (21B). Moreover, the actuation is controlled based on control signal S2A (S2B) to which CCD23A (23B) is supplied from camera signal-processing section 21A (21B).

[0026] Camera signal-processing section 21A (21B) has camera process 24A (24B), interface 25A (25B), CPU (Central Processing Unit) 26A (26B), and power-source DC to DC converter 27A (27B). CPU26A (26B) controls actuation with camera process 24A (24B) and interface 25A (25B).

[0027] Camera signal-processing section 21A (21B) inputs into camera process 24A (24B) image pick-up signal S1A (S1B) outputted from camera head section 14A (14B). Camera process 24A (24B) from the signal-processing section which is not illustrated in body section 17A (17B) Based on control signal S3A (S4B) which shows the image pick-up conditions supplied through interface 25A (25B), image pick-up signal S1A (S1B) is changed into picture signal S4A (S4B), and this is outputted to the above-mentioned signal-processing section through interface 25A (25B). Moreover, power-source DC to DC converter 27A (27B) is made as [ supply / to each part / the supply voltage supplied from this signal-processing section ].

[0028] In the above configuration, with a desktop conferencing system 10, while displaying image 18B set to liquid crystal panel section 13A by the side of user 15A by user 15B, while user 15A (15B) views image 18B (18A), respectively, a conference is held through a microphone and a loudspeaker by displaying image 18A set to liquid crystal panel section 13B by the side of user 15B by user 15A.

[0029] In this desktop conferencing system 10, in holding a conference When user 15A (15B) rotates *camera head section 14A (14B)* and makes it rise from stowage 16A (16B) The image pick-up direction of camera head section 14A (14B) can be changed near the look which views image 18B (18A) as which user 15A (15B) was displayed on liquid crystal panel section 13A (13B). Therefore, while being able to make the look of user 15A and user 15B in image 18B agree mostly, the look of user 15B and user 15A in image 18A can be made to agree mostly.

[0030] With this, in this desktop conferencing system 10 By having divided television camera 20A (20B) into camera head section 14A (14B) and camera signal-processing section 21A (21B), and having formed camera head section 14A (14B) in the shape of [ very thin ] a cylinder Even if it locates the camera head section 14A (14B) concerned near the look of user 15A (15B) It can prevent becoming the obstacle of user 15A (15B) which views image 18B (18A), and user 15A (15B) can view image 18B (18A) in this way, without therefore sensing sense of incongruity for camera head section 14A (14B) located near the look.

[0031] Moreover, by having formed so that camera head section 14A (14B) might be located near the look of user 15A (15B) when camera head section 14A (14B) was made to rise Even if user 15A (15B) does not adjust the location only by making camera head section 14A (14B) rise, it can make the look of user 15A (15B) and user 15B (15A) in image 18B (18A) agree, therefore may improve user-friendliness much more.

[0032] By separating television camera 20A (20B) to camera head section 14A (14B), miniaturizing, rotating this miniaturized camera head section 14A (14B), and having made it make it rise according to the above configuration The image pick-up direction of camera head section 14A (14B) can be changed near the look of the user 15A (15B) concerned so that it may not become the obstacle of user 15A (15B). Therefore, the look of user 15A (15B) and user 15B (15A) in image 18B (18A) can be made to agree mostly, without giving the sense of incongruity by camera head section 14A (14B). Natural image 18B (18A) which does not have sense of incongruity in this way can be obtained, and natural conversation

can be realized.

[0033] In addition, although the case where camera head section 14A (14B) was attached in the lower part of liquid crystal panel section 13A (13B) free [ rotation ] was described in the gestalt of above-mentioned operation This invention is set not only to this but to the desktop conferencing system 30 using the desktop mold PC as shown in drawing 4 . After dividing a television camera into the camera head section 31 and the camera signal-processing section 32, Among these, even if it therefore supports only the camera head section 31 to a stand 33 and prepares the camera head section 31 and a stand 33 concerned between a display 34 and a keyboard 35 A user 36 can locate the camera head section 31 near the look which views the image 37 displayed on the display 34, and the same effectiveness as an above-mentioned case can be acquired also in this case.

[0034] As furthermore shown in drawing 5 , the camera head section 40 and the camera signal-processing section 41 may be unified through the hollow stand 42, and the same effectiveness as an above-mentioned case can be acquired also in this case.

[0035] As furthermore shown in drawing 6 , by containing the camera signal-processing section which is not illustrated on a keyboard 50, and forming the camera head section 52 in the keyboard 50 concerned through a stand 51, these keyboards 50, a stand 51, and the camera head section 52 may be unified, and the same effectiveness as an above-mentioned case can be acquired also in this case.

[0036] In this case, you may form free [ rotation ] by the flexible member which can bend stands 33, 42, and 51 freely, and the same effectiveness as an above-mentioned case can be acquired also in this case.

[0037] Moreover, although the case where camera head section 14A (14B) and stowage 16A (16B) were prepared in the lower part of liquid crystal panel section 13A (13B) was described in the gestalt of above-mentioned operation Even if it prepares this invention in a part of upper part [ of for example, not only this but liquid crystal panel section 13A (13B) ], flank, or body section 17A (17B), it can acquire the same effectiveness as an above-mentioned case.

[0038] Moreover, in the gestalt of above-mentioned operation, although the case where camera signal-processing section 21A (21B) was contained to body section 17A (17B) was described, even if it contains this invention not only to this but to liquid crystal panel section 13A (13B), it can acquire the same effectiveness as an above-mentioned case.

[0039] Moreover, although the case where this invention was applied to laptop type PCs 11A and 11B was described in the gestalt of above-mentioned operation Even if this invention applies this invention not only to this but to for example, the desktop mold PC, the same effectiveness as an above-mentioned case can be acquired. In this case, what is necessary is just to be able to locate the camera head section near a user's look in short, that what is necessary is just to prepare the camera head section in some of displays or keyboards, enabling free rotation, when the camera head section is made to rise.

[0040] Moreover, although the case where this invention was applied to the desktop conferencing system 10 which holds a conference between two conference rooms in a remote place in the gestalt of above-mentioned operation was described Even if this invention applies this invention to the desktop conferencing system which holds a conference not only this but among two or more conference rooms, the same effectiveness as an above-mentioned case can be acquired. In this case, a desired user's image may be switched and expressed as desired timing among two or more users' transmitted images, or the display screen may be divided and each user's image transmitted to each of this divided display screen may be displayed, respectively.

[0041] Furthermore, although the case where this invention was applied to a desktop conferencing system 10 in the gestalt of above-mentioned operation was described, even if this invention applies this invention to the teleconferencing equipment which connected two or more terminal units for teleconferencing through the predetermined communication line not only like this but like for example, a television conference system, it can acquire the same effectiveness as an above-mentioned case.

[0042]

[Effect of the Invention] According to this invention, the look of the user who views the image concerned for the look of the user in the image which the image pick-up direction of the image pick-up means concerned could be changed near a user's look, therefore was displayed on the display means can

be made to agree mostly as mentioned above by having made adjustable the image pick-up direction of an image pick-up means. The natural image which does not have sense of incongruity in this way can be obtained.

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**TECHNICAL FIELD**

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[Field of the Invention] This invention relates to teleconferencing equipment and the terminal unit for teleconferencing, for example, is PC (Personal Computer). It applies to the used desktop conferencing system, and is suitable.

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**PRIOR ART**

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[Description of the Prior Art] Conventionally, this kind of desktop conferencing system is made as [ hold / a conference / between the conference rooms of these plurality ] by installing PC in two or more conference rooms of each in a remote place, and connecting by the communication line. When a conference is held between two conference rooms located in a remote place, for example as such a desktop conferencing system, A microphone and a loudspeaker are prepared in some PCs arranged in these two conference rooms, respectively at a television camera list. While displaying its own image on the display of PC of the other party, respectively by transmitting mutually the voice which collected the sound with image and microphone of the user who picturized with the television camera through a communication line, there are some which output voice from the loudspeaker of the other party, respectively. Therefore, the user is made as [ hold / a conference ] by viewing the image of the dialogue partner concerned displayed on the display, hearing a dialogue partner's voice outputted from a loudspeaker.

[0005] In such a desktop conferencing system, in order to hold a conference, viewing a dialogue partner's image displayed on the display, therefore, it picturizes to the television camera in which the user who is viewing this display was prepared by PC, and displays on the display prepared in the conference room of the other party by transmitting the image of the user concerned who picturized through a communication line. The television camera used with this desktop conferencing system was usually prepared in the upper part or a flank of a display etc. on the relation of magnitude.

[0006] The configuration of the conventional desktop conferencing system 1 is explained here using drawing 7. This desktop conferencing system 1 consists of communication lines 3 which connect these two sets of two sets of desktop mold PC2A and 2Bs which were prepared in two conference rooms in a remote place, respectively, and PC2A and 2Bs. In this case, PC2A and 2B have the same configuration so that it may state below.

[0007] PC2A (2B) has display 4A (4B) as a display means to display an image, and television camera 5A (5B) is attached in the upper part of these displays 4A (4B), respectively. The microphone (not shown) which collects its voice to PC2A (2B), and the loudspeaker (not shown) which outputs a dialogue partner's voice are attached in the predetermined location with this, respectively. Moreover, PC2A (2B) has keyboard 6A (6B) as an input means to input directions information etc., and user 7 of PC2A (2B) A (7B) is made as [ input / various kinds of directions information / from these keyboard 6A (6B) /, respectively ].

[0008] So, in a desktop conferencing system 1, if predetermined directions information is therefore inputted into user 7A (7B) from keyboard 6A (6B), respectively By transmitting mutually the voice therefore collected by image 8A (8B) and the microphone of user 7A (7B) therefore picturized by television camera 5A (5B) through a communication line 3 While carrying out a screen display of the image 8A to display 4B of PC2B and carrying out a screen display of the image 8B to display 4 of PC2A A, voice is outputted from the loudspeaker of the other party.

[0009] User 7A in this way, viewing image 8B which becomes by a dialogue partner's user 7B displayed on display 4 of PC2A A While talking therefore to the microphone and loudspeaker which were prepared

in the PC2A concerned, user 7B Viewing image 8A which becomes by a partner's user 7A displayed on display 4B of PC2B, therefore, it can talk to the microphone and loudspeaker which were prepared in the PC2B concerned, and the users 7A and 7B located in a remote place by this can hold a conference.

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**EFFECT OF THE INVENTION**

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[Effect of the Invention] According to this invention, the look of the user who views the image concerned for the look of the user in the image which the image pick-up direction of the image pick-up means concerned could be changed near a user's look, therefore was displayed on the display means can be made to agree mostly as mentioned above by having made adjustable the image pick-up direction of an image pick-up means. The natural image which does not have sense of incongruity in this way can be obtained.

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[Translation done.]

**\* NOTICES \***

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3. In the drawings, any words are not translated.

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**TECHNICAL PROBLEM**

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[Problem(s) to be Solved by the Invention] by the way -- in order that television camera 5A (5B) may picturize in the desktop conferencing system 1 of this configuration, respectively so that user 7A (7B) which is viewing display 4A (4B) may be looked down on from a top, or, as for picturized image 8A (8B), user 7A (7B) has turned to the bottom -- a thing [ like ] -- intermediary \*\*\*\*\*. In this desktop conferencing system 1, image 8A (8B) picturized in this way is transmitted, and image 8A (8B) user 7A (7B) has turned [ A ] to the bottom is displayed on display 4B (4A), respectively. For this reason, the problem which senses sense of incongruity and unnaturalness in case user 7A (7B) views image 8B (8A) currently displayed on display 4A (4B) in a desktop conferencing system 1, respectively since the look of user 7B and user 7A in image 8A does not agree while the look of user 7A and user 7B in image 8B does not agree is \*\*\*\*\*.

[0011] This invention tends to propose the teleconferencing equipment and the terminal unit for teleconferencing which can acquire the natural image which was made in consideration of the above point and does not have sense of incongruity.

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[Translation done.]

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## DESCRIPTION OF DRAWINGS

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### [Brief Description of the Drawings]

[Drawing 1] It is the approximate line Fig. showing the personal computer meeting structure of a system by the gestalt of 1 operation of this invention.

[Drawing 2] It is the approximate line Fig. showing the configuration of the camera head section.

[Drawing 3] It is the block diagram showing the circuitry of a television camera.

[Drawing 4] It is the approximate line Fig. showing the personal computer meeting structure of a system by the gestalt of other operations.

[Drawing 5] It is the approximate line Fig. showing the configuration of the television camera by the gestalt of other operations.

[Drawing 6] It is the approximate line Fig. showing the configuration of the television camera by the gestalt of other operations.

[Drawing 7] It is the approximate line Fig. showing the conventional personal computer meeting structure of a system.

### [Description of Notations]

10 [ .. The liquid crystal panel section, 14 / .. The camera head section, 16 / .. A stowage, 17 / .. The body section, 18 / .. An image, 19 / .. A supporter, 20 / .. A television camera, 21 / .. The camera signal-processing section, 22 / .. A lens, 23 / .. CCD, 24 / .. Camera process ] .... A desktop conferencing system, 11 .. PC, 12 .. A communication line, 13

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[Translation done.]

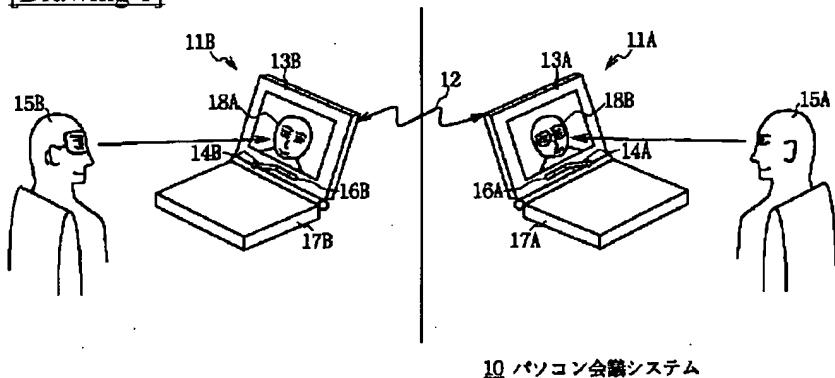
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## DRAWINGS

## [Drawing 1]



13A: LCD panel section

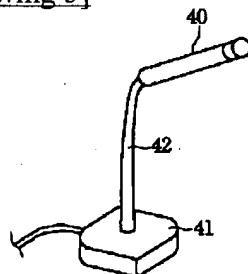
14A: Camera head

16A: Container section  
storage

11B/11A: PC

図1 本実施の形態によるパソコン会議システムの構成

## [Drawing 5]



40: Camera head part

41: Camera signal processing part

42: hollow stand

図5 他の実施の形態によるテレビカメラの構成（1）

## [Drawing 2]

Drawing 2

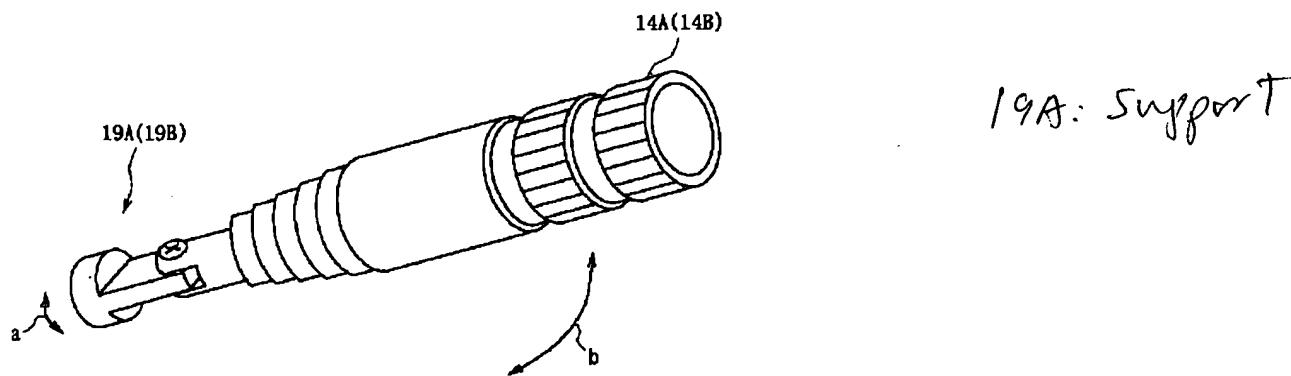


図2 カメラヘッド部の構成

[Drawing 3]

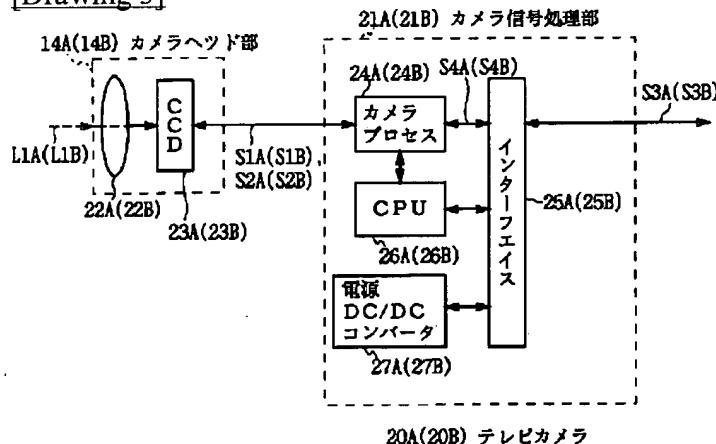
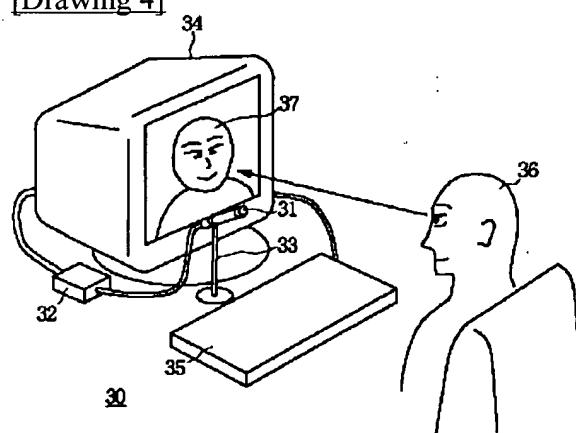


図3 テレビカメラの回路構成

[Drawing 4]

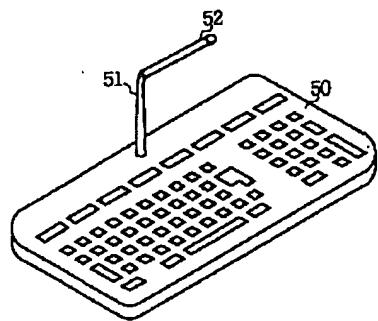


31: Camera head  
 33: Stand  
 34: display

図4 他の実施の形態によるパソコン会議システムの構成

[Drawing 6]

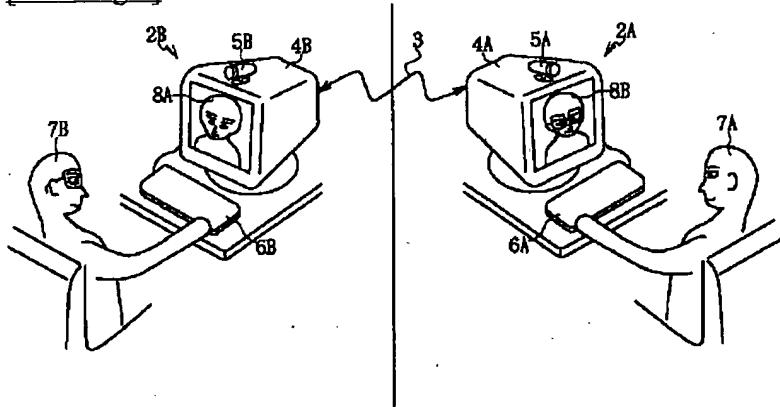
Drawing 6



52: Camera head  
51: Stand

図6 他の実施の形態によるテレビカメラの構成（2）

[Drawing 7]



1 パソコン会議システム

図7 従来のパソコン会議システムの構成

[Translation done.]